

THREE OPILIONID SPECIES (ARACHNIDA: OPILIONES: ASSAMIIDAE AND GAGRELLIDAE) FROM WEST JAVA, INDONESIA

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Synopsis

SUZUKI, Seisho (17-2, Nishihakushima-cho, Naka-ku, Hiroshima-shi 730, Japan) : Three opilionid species (Arachnida: Opiliones: Assamiidae and Gagrellidae) from West Java, Indonesia. *Acta arachnol.*, 34: 41-47 (1986).

Genitalic structures are described for assamiid, *Mermerus beccari* THORELL, and figures of the body, chelicerae, palps, legs and genitalia are presented. Descriptions and figures are presented for two new gagrellids, *Gagrellula kubotai* and *G. granulata*.

In this paper one assamiid species and two new gagrellid species are described and illustrated.

All holotypes are deposited presently in my personal collection.

Before going further, I wish to thank Mr. M. KUBOTA, Odawara-shi, who placed the material at my disposal.

Suborder Laniatores THORELL

Family Assamiidae SOERENSEN

***Mermerus beccari* THORELL, 1876**

(Fig. 1)

Mermerus beccari THORELL, 1876: 124.—ROEWER, 1923: 229, Fig. 256; 1927: 350; 1935: 126.

Material. Indonesia: West Java, Bogor, 15. iii. 1984, 1♂, 1♀ (M. KUBOTA).

The specimens here examined agreed with the description hitherto published except for that the distitarsus of the second tarsus varied in the number from 3 to 6 (for its variation see below). The pseudotrochanter-like structure of the

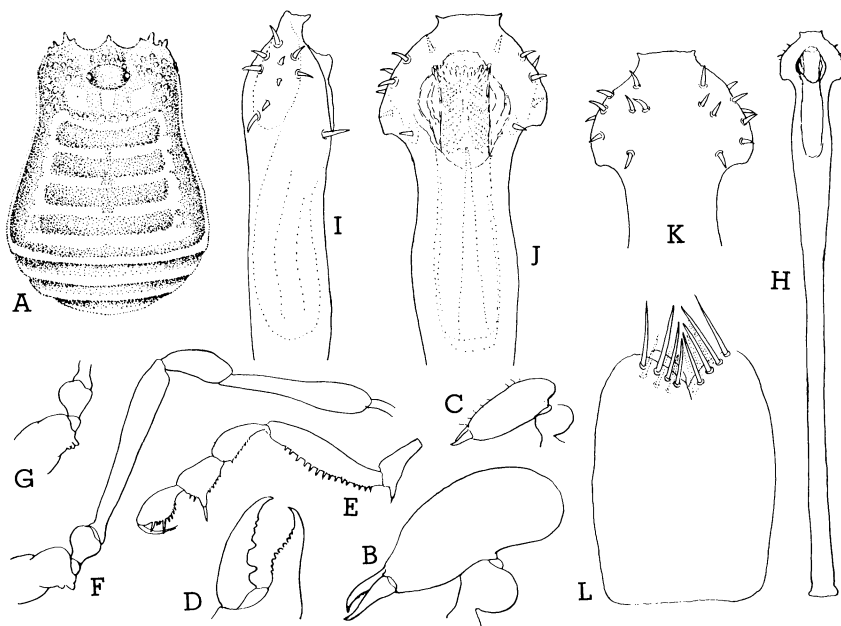


Fig. 1. *Mermerus beccari* THORELL. A. Dorsal view of ♂. B-C. Lateral view of chelicerae, B, ♂, C, ♀. D. Cheliceral fingers, frontal view, ♂. E. Lateral view of palp, ♂. F. Coxa, trochanter, femur, patella and tibia of right leg IV, ♂. G. Coxa and trochanter of leg IV, ♀. H. Dorsal view of entire penis. I. Lateral, J. dorsal, and K. ventral views of apical portion of penis. L. Dorsal view of ovipositor. (A, F-G $\times 7$; B-C $\times 10$; E $\times 13$; H, L $\times 50$; I-K $\times 120$)

fourth coxa is well-developed in the male, while it is not so distinct in the female (compare Fig. 1F with G). In order to make the specific description more complete, measurements and illustrations are given. Also, male and female genitalia are described for the first time.

Measurements (in mm). Body ♂ 4.7 long, 3.2 wide (♀ 5.4 long, 3.2 wide). Length of femora ♂ 2.3 : 3.7 : 2.9 : 4.2 (♀ 2.0 : 3.1 : 2.3 : 3.0). Total length of legs ♂ 8.7 : 14.2 : 10.2 : 14.2 (♀ 7.3 : 11.8 : 8.2 : 10.6). Penis 1.7 long. Segments of distitarsus: I ♂ 1/3 (♀ 3/3), II ♂ 6/6 (♀ 3/5). Tarsal segments ♂ 6/4 : 17/17 : 6/6 : 7/7 (♀ 6/6 : 13/11 : 6/6 : 7/7).

Penis (Fig. 1 H-K). Shaft slender and very long, basal 2/3 with sides parallel, then somewhat widened and after a slight constriction widened again, giving an appearance of blunt alate form; distal end truncated, with a pointed apex at both extremities; a blunt dorsal keel at widest alate part below. Spine-

funnel well-developed. Short setae disposed as shown in Fig. 1 H-K.

Ovipositor (Fig. 1L). Relatively long; both lobes with 4 dorsal and 3 ventral setae.

Distribution. Java.

Suborder Palpatores THORELL

Family Gagrellidae THORELL

***Gagrellula kubotai* n. sp.**

(Fig. 2)

Material. Holotype ♂ : Indonesia : West Java, Cibodas, altitude at 1300 m, 7. iii. 1984 (M. KUBOTA).

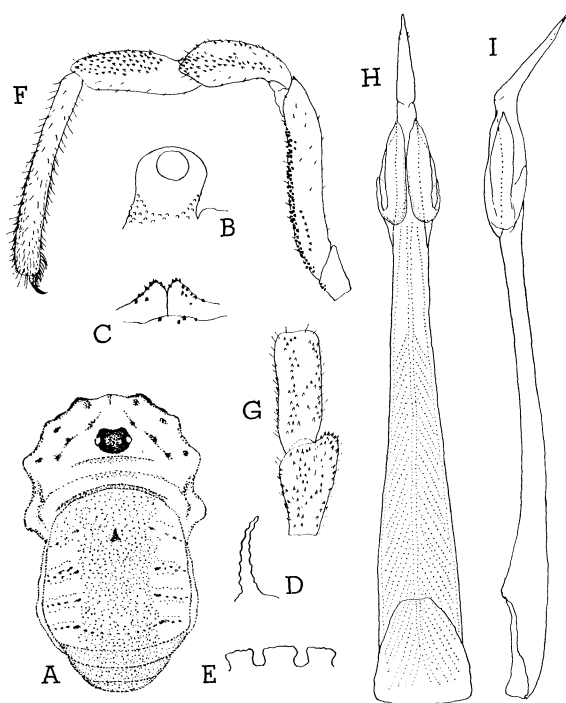


Fig. 2. *Gagrellula kubotai* SUZUKI, holotype ♂. A. Dorsal view of body. B. Lateral view of eye tubercle. C. Supracheliceral lamellae. D. Right side view of scutal spine. E. Marginal humps of coxa I. F. Mesal view of right palp. G. Dorsal view of left palpal patella and tibia. H. Ventral and I. lateral view of penis. (A $\times 10$; B, F-G $\times 25$; D $\times 15$; H-I $\times 40$)

Measurements (in mm). ♂: Body 3.9 long, 2.4 wide. Length of femora 11.1: 20.2: 9.7: 13.3. Total length of legs 54.0: 107.6: 49.1: 67.2. Penis 3.4 long, 0.4 wide, glans 0.5 long.

Male. Dorsum of the body shown in Fig. 2 A. Carapace smooth except lateral margins with dark brown fine granules. Thoracic tergites, scutum and free tergites clothed with fine dark brown granules scattered mainly on median areas. Median spine on scutal area II slender, curved forward, rugose. Eye tubercle slants posteriorly, canaliculate above, unarmed along ridges, only basally with fine granulations. Coxae I-IV with fine granules only at middle, and a row of marginal humps anteriorly on all coxae and posteriorly on IV. Edges of humps bluntly quadrated. Genital plate with fine granules on both sides, smooth at median; free sternites each with a strip of fine granules at anterior margin.

Chelicerae. Segment I with a few dark brown denticles above, II unarmed; supracheliceral lamellae toothed as in Fig. 2 C.

Palpi (Fig. 2 F-G). Trochanter toothed below. Femur ventrally on the entire length with dense dark brown teeth, medially with a proximal row of teeth. Patella with a small but distinct apophysis, tibia without apophysis; both the segments thickly with pointed fine teeth on dorsal and both lateral sides. Tarsus without a ventral row of teeth, only hairy.

Legs. Slender and very long. Trochanters smooth; femora, patellae and tibiae with rather numerous fine teeth throughout. Noduli formula 0:3:0:0.

Coloration. Dorsum and venter whitish in ground color and clothed thickly with whitish secretions. Carapace with two diagonal rows of small brown patches on each side. Eye tubercle blackish brown, only frontal area white. Scattered granules and median spine of dark brown contrasting to whitish background of scutum and free tergites. Proximal portion of coxae I-IV and edges of small humps dark brown, and so median area of genital plate. Chelicerae and palpi uniformly light yellow. Trochanters of legs blackish brown, with one or two whitish patches above; capita of femora dark brown, the remaining part of femora and the other leg-segments rusty brown.

Penis (Fig. 2 H-I). Shaft widest at base, becoming gradually narrower toward tip; ventral side of basal aperture deeply indented. Alate part wider than shaft. Glans elongated. Musculature limited in proximal 2/3 of the shaft.

Female. Unknown.

Remarks. The present species seems to be most close to *Gagrellula albicoxa* (LOMAN, 1892) recorded from Java in the possession of the following character

combination: (1) scutum with one median spine, (2) palpal patella with a distinct apophysis, (3) eye tubercle unarmed above, and (4) edges of marginal humps of coxae quadrately blunted. However, it differs from *albicoxa* in having much longer legs and in lacking a definite row of ventral teeth on the palpal tarsus. Also, the coloration differs between the two species; namely, the dorsum is rusty brown in ground color and the carapace with a distinct brown island-fleck around the eye tubercle in *albicoxa*, while in this species the ground color is white and no island-fleck is present on the carapace.

***Gagrellula granulata* n. sp.**

(Fig. 3)

Material. Holotype ♀ : Indonesia : West Java, Cibodas, altitude at 1300 m, 7. iii. 1984 (M. KUBOTA).

Measurements (in mm). ♀ : Body 5.2 long, 3.1 wide. Length of femora 8.9 : 15.9 : 8.4 : 11.0. Total length of legs 41.2 : 82.6 : 39.8 : 53.1.

Female. Dorsum of the form shown in Fig. 3 A. Surface of dorsum, namely, carapace, scutum and free tergites clothed uniformly and finely with granules, only sides of abdomen and soft skin between sclerotized free tergites

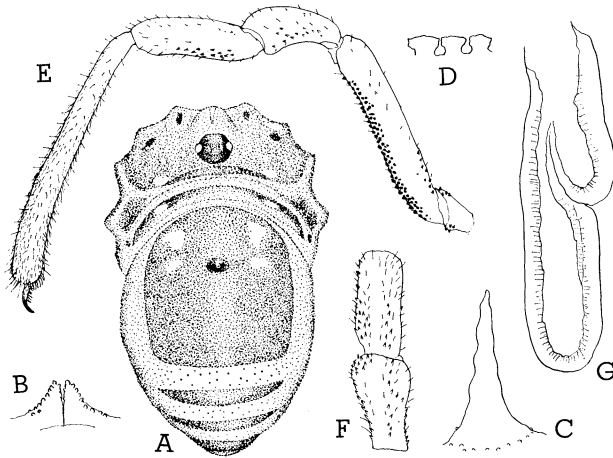


Fig. 3. *Gagrellula granulata* SUZUKI, holotype ♀. A. Dorsal view of body. B. Supracheliceral lamellae. C. Left side view of scutal spine. D. Marginal humps of coxa I. E. Ectal view of left palp. F. Dorsal view of right palpal patella and tibia. G. Seminal receptacle. (A $\times 9$; C, E-F $\times 25$; G $\times 400$)

smooth. Median spine of scutal area II rather strong, erect and rugose. Eye tubercle slants posteriorly, canaliculate, completely unarmed. Surface of all coxae uniformly and finely granular; a marginal row of teeth (edges of teeth bluntly quadrated) present anteriorly on all coxae and posteriorly on IV. Genital plate granular on each side, smooth at middle; free sternites finely granular, only connecting membranes between sternites smooth.

Chelicerae. Segment I with 3-5 dark brown denticles above, II unarmed; suprachelical lamellae as in Fig. 3 B.

Palpi (Fig. 3 E-F). Trochanter and femur toothed below, especially femur with a dense covering of dark brown teeth on the entire length, a short row of teeth medially at base and some scattered teeth at base above. Patella somewhat widened distally but without a distinct apophysis, patella and tibia with pointed denticles on dorsal and both lateral sides. Tarsus longer than tibia plus patella, only hairy.

Legs. Slim and long. Trochanters smooth, femora with but few fine teeth, the remaining leg-segments unarmed. Noduli formula 0 : 3 : 0 : 0.

Coloration. Dorsum dark to blackish brown, only small frontal area slightly lighter. Two thoracic segments and first two scutal areas with two whitish markings of secretions as shown in Fig. 3 A. Sides of abdomen and soft skin between free tergites rusty brown. Coxae I-IV blackish brown, only IV with a large white area which clothed with thick secretions on the anterior distal region. Genital plate and free sternites rusty brown, partly darker. Chelicerae and palpi light yellow. Trochanters blackish brown below, rusty brown above with brown reticulations; the remaining leg-segments dark brown, capita of femora somewhat paler; femora distally, entire patellae and tibiae darker distally.

Ovipositor. 3 forceps segments+21 normal segments; first 10 segments with a whirl of 8 spines, 11th with but 2 spines. Seminal receptacles in the second and third segments; two ampullae elongated as shown in Fig. 3 G.

Male. Unknown.

Remarks. In the structure of the eye tubercle and first chelical segment, in having only one scutal spine and in lacking apophysis on the palpal patella, this species seems to be most closely related to *Gagrellula luteipalpis* ROEWER, 1954 described from Burma. However, they are steadily separated by the following table:

	<i>G. luteipalpis</i>	<i>G. granulata</i>
Color of dorsum	Rusty red	Dark to blackish brown
Coxae of legs	Whitish; coarsely granular	Blackish brown; uniformly and finely granular
Scutal spine	Smooth	Rugose

摘 要

鈴木正将 (〒730 広島市中区西白島町 17-2) : ジャワ島の Opiliones 3 種 (Assamiidae, Gagrellidae)。

インドネシア, ジャワ島産の Opiliones 標本を検討し, *Mermerus beccari* THORELL を再記載するとともに, *Gagrellula kubotai* および *G. granulata* を新種として記載した。

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